



WASHINGTON STATE UNIVERSITY

**College of Pharmacy and  
Pharmaceutical Sciences**

**GRADUATE PROGRAM IN  
PHARMACEUTICAL SCIENCES  
AND  
MOLECULAR MEDICINE**

**STUDENT HANDBOOK**

**2026 / 2027**

**Revised 2026**



WASHINGTON STATE UNIVERSITY

**College of Pharmacy and  
Pharmaceutical Sciences**

## MISSION STATEMENT

**Mission of the Graduate Program in Pharmaceutical Sciences & Molecular Medicine:** Produce graduates for teaching, research, and clinical careers in academia, industry, health care, and other public and private institutions dedicated to the promotion of human health and wellness. We apply multi-disciplinary basic and translational research approaches to 1) understand mechanisms of disease, 2) identify novel therapeutic targets, 3) develop and optimize pharmaceutical treatment approaches, and 4) promote the prevention and management of chronic diseases. Pharmacology, pharmacotherapeutics, biopharmaceutics, pharmacokinetics, and pharmacogenomics are emphasized in the curriculum. We strive to prepare students to become independent and creative problem solvers who will develop into leaders in their respective fields.

## LEARNING OUTCOMES

1. Demonstrate mastery of knowledge in the general field of Pharmaceutical Sciences and Molecular Medicine.
2. Develop the expertise to use appropriate methodologies to solve novel and emerging problems related to Pharmaceutical Sciences and Molecular Medicine.
3. Disseminate research findings to local, regional, national, and international audiences primarily through publication in peer-reviewed journals and presentations at conferences.
4. Participate in professional organizations, including becoming members, attending meetings, and taking leadership roles where appropriate.
5. Participate in teaching, internships, fellowships, workshops, credentialing, and grant applications to enhance competitiveness for career opportunities as appropriate.
6. Develop critical, integrative, and evaluative thinking at the highest levels of rigor.
7. Develop advanced written and oral communication skills.
8. Become independent, self-motivated researchers with the ability to identify specific problems in their field of expertise and to formulate solutions to these problems.
9. Develop a comprehensive knowledge of previous and current research in their field of expertise and be able to demonstrate that knowledge capability in a review of the literature at a level that is potentially publishable.
10. Generate innovative questions within their field of expertise and pose hypotheses related to those questions.
11. Apply sound methodological approaches to test hypotheses related to specific research questions and describe the methods effectively.
12. Perform statistical analyses of research data and present the results in a way that clearly describes the data.

## Contents

MISSION STATEMENT .....	2
LEARNING OUTCOMES .....	3
QUICK CONTACT INFORMATION.....	7
Associate Dean of Research and Graduate Education .....	7
Graduate Program Coordinator .....	7
Graduate Student Assistantship .....	7
Payroll Deduction.....	7
Information: .....	7
Enrollment Procedure: .....	7
Assistantship Stipends .....	8
Fellowships .....	9
Graduate Teaching Assistant (TA) .....	9
Graduate Research Assistant (RA).....	9
Assistantship Tuition Waivers .....	9
Tuition Flex Waiver.....	10
Graduate Assistant Medical Insurance .....	10
Insurance for Spouse/Domestic Partner and Dependents .....	10
Graduate Student Assistantship Leave.....	10
ADDITIONAL LEAVE GUIDELINES .....	10
Graduate Student Leave of Absence .....	11
Short-term Pregnancy/Parental Leave .....	11
Society Memberships and Scientific Meetings.....	11
College of Pharmacy Travel Grants.....	12
ASWSU Travel Grants.....	12
Graduate Student Safety .....	12
Mandatory Trainings .....	12
The Office of Emergency Management.....	14
Emergency Sites, Medical Emergency Protocol and more: .....	14
Alert Sign-up: .....	14

Office of Research: .....	14
Laboratory Safety: .....	14
Core Facilities: .....	14
Environment Health and Safety: .....	14
Student Care Network.....	14
Submitting A Care Network Referral.....	15
Doctor Of Philosophy (PhD) Pharmaceutical Sciences and Molecular Medicine Curriculum .....	15
WSU Graduate School Degree Requirements (PhD) .....	15
PhD Program Requirements.....	15
REQUIRED CORE COURSES .....	15
ELECTIVES .....	16
APPROVED OTHER SUGGESTED ELECTIVES .....	16
Transfer Credits .....	17
Program Advising.....	17
Rotations.....	17
Selection of Laboratory Rotation Advisor(s).....	18
Rotation Expectations .....	18
Process for a Third Rotation Exception .....	19
Rotation Contract.....	19
Rotation Evaluation .....	20
Selection of a Permanent Advisor/Mentor .....	20
Advising Agreement .....	20
Responsibilities of Permanent Research Advisor/Mentor.....	21
Dissolution of Advising Agreement .....	21
Change of Advisor Agreement.....	21
Selection of Dissertation (PhD) Committee .....	22
Selection of Administrative Chair .....	22
Responsibilities of the Administrative Chair.....	22
Selection of Additional Committee Members.....	23
Role of Dissertation Committee.....	23
Examinations .....	24
Preparation for the Examinations.....	24

DOCTORAL DEGREE.....	24
Preliminary Examination .....	24
Preliminary Exam Policies .....	25
Examination Process .....	25
PART A. ....	25
PART B .....	26
Logistics.....	27
Final Examination .....	27
Doctoral Final Exam Policies .....	27
Ph.D. Dissertation Format .....	28
Examination Process .....	30
PART A. This part will consist of the student submitting their final dissertation manuscript to their committee for review. ....	30
PART B .....	30
Logistics.....	31
Internships.....	31
Seminars and Workshops.....	31
Forms.....	32
General Requirements .....	32
Termination of Enrollment.....	32
Assistantships.....	32
Annual Reviews.....	33
Students Without Permanent Research Advisor/Mentor .....	33
Students with Permanent Research Advisor/Mentor .....	33
Follow up meetings for all Reviews .....	34
Data Collection .....	34
DATA STORAGE AND PROTECTION .....	34
Affiliation .....	34
Students with Accommodations .....	35
Center for Community Standards.....	35
Grievance Procedures .....	35
Collective Bargaining Agreement .....	35

## QUICK CONTACT INFORMATION

### Associate Dean of Research and Graduate Education

Dr. Salah Ahmed [salah.ahmed@wsu.edu](mailto:salah.ahmed@wsu.edu) 509-368-6566

### Graduate Program Coordinator

Courtney Bilodeaux [courtney.bilodeaux@wsu.edu](mailto:courtney.bilodeaux@wsu.edu) 509-368-6607

## Graduate Student Assistantship

Graduate student estimated fees per academic school year (for resident, or with non-resident tuition waiver, for fall and spring)

Service/Activity/Building Fee \$599.00

Health & Wellness Fee \$260.00

***Total paid by student with waiver \$859.00***

Non-Resident students should note that the Financial Aid Office awards all graduate students initially with resident tuition rates as most non-resident graduate students on graduate assistantships, including international students, will be receiving a tuition waiver. If this is not the case for you, please file a revision request form to have your budget increased to the non-resident cost at <http://finaid.wsu.edu/your-award/revision-requests/>. This budget is based on 10-18 credits per term. The cost for resident students is \$703.00 per credit and \$1,510.00 per credit for non-residents.

All assistantships in the College of Pharmacy and Pharmaceutical Sciences *include* a tuition waiver, health insurance, and monthly stipend. When you enroll for classes, you **do not** need to sign up for health insurance. If you sign up for it, you will have to pay for that insurance. Student fees may be paid through payroll deduction.

## Payroll Deduction

Information: <https://payroll.wsu.edu/graduate-student-payroll-deduction/>

Enrollment Procedure: <https://payroll.wsu.edu/graduate-student-enrollment-procedure/>

There are Spokane allocated students' fees that are the student's responsibility. These fees include service and activities fee (S&A) for funding student activities, health service fee, and

programs may have specific fees. You can access your account at myWSU by selecting "Finance". Payroll deduction allows the fees to be deducted a little at a time from each pay period instead of all at once. You can also go online to myWSU and sign up for payroll deduction. You **must** apply for payroll deduction by the third Friday of classes, and the first deduction will be from your September 25 paycheck. **If you do not sign up for payroll deduction or pay your fees before the third Friday of classes, you will be subjected to a late fee.**

Direct deposit is available and can be arranged with payroll services and your bank. Your check will automatically be deposited on the 10th and 25th of each month and you will not have to wait for it to come in the mail. You can sign up for direct deposit online at: <http://www.wsu.edu/payroll/fspay/directdep/enroll.htm>

## Assistantship Stipends

<https://gradschool.wsu.edu/assistantships/>

Students may receive assistantships for research (RA) or teaching (TA), or externally funded fellowships. To receive assistantships or fellowships, students must be enrolled full-time and register for a minimum of 10 credit hours per semester. Assistantship appointments are for the semester (August 16–Dec. 31; Jan. 1–May 15) and may be renewed if the student is making satisfactory progress toward his/her degree. These appointments are always half-time, reflecting the fact that students are enrolled in courses during the semester. Support for the summer months is typically available, usually for twelve weeks. The table below shows *monthly* assistantship salaries for half-time appointees who have been awarded in-state tuition waivers. Appointments at the higher level are for those who have successfully passed their preliminary examination (increase starts at beginning of the **next** semester after passing the preliminary examination).

TA or RA ( <i>prior to prelim examination</i> )	\$2,612.00/month
TA or RA ( <i>semester following successful completion of Ph.D. preliminary examination and didactic courses</i> )	\$2,747.50/month

***Students must establish Washington State residency by the end of their first year. Out-of-state tuition is only waived for one year.***

**Students receiving assistantships are expected to devote 20 hours per week to their college responsibilities (teaching and/or research).** In addition to this commitment, students who register for independent study, thesis research, and/or doctoral research (PharmSci 800) must devote sufficient time to accomplish the goals that have been set forth by the student, advisor, and the student's research committee. If a student withdraws, does not

complete the semester or otherwise fails to uphold their duties, the student may be responsible for repayment of all or a portion of the tuition waiver.

## Fellowships

The Program strongly encourages students to write proposals for extramural fellowships. Common sources of funding for fellowships can be found at the following sites:

1. [Office of Grant and Research Development \(OGRD\)](#)
2. [Pharmaceutical Research and Manufacturers of America Foundation](#)
3. [American Foundation of Pharmaceutical Education](#)
4. [National Research Service Awards through the National Institutes of Health](#)
5. [Howard Hughes Medical Institute](#)
6. [National Science Foundation](#)
7. [Congressionally Directed Medical Research Programs associated with the Department of Defense](#)
8. [The Achievement Rewards for College Scientists \(ARCS\) Foundation](#)
9. [The Alcohol and Drug Abuse Research Program \(ADRP\)](#)
10. [American Heart Association](#)

**You must talk to your Research Advisor/Mentor before submitting applications for any of these fellowships.** Most applications must be submitted through the [WSU Office of Grant and Research Development](#)

## Graduate Teaching Assistant (TA)

A teaching assistantship (TA) is an appointment in which a graduate student's primary duty is teaching or serving as a teaching assistant. The TA may assist faculty in teaching undergraduate courses and labs, grading examinations, problem sets, or lab assignments, setting up displays for lectures and labs, or preparing or maintaining laboratory equipment.

## Graduate Research Assistant (RA)

A Research assistantship (RA) is an appointment in which a graduate student is engaged in research under a faculty member's supervision. The faculty member is generally a principal investigator on a grant or contract.

## Assistantship Tuition Waivers

Graduate assistants who maintain at least a half-time (20 hrs. /wk.) appointment are eligible for full tuition waivers. Students appointed a quarter time assistantship (10 hrs./wk.) are eligible for half tuition waivers. To qualify for a tuition waiver, **students must reside within the state of Washington.** Non-resident graduate students on assistantship appointments are eligible for a

non-resident waiver for the out-of-state portion of tuition during the first year they are on assistantship appointment at WSU. During that first year, students are responsible for taking all necessary steps to establish legal residency in the state of Washington. If residency is not established, non-resident graduate students will be responsible for non-resident tuition after their first academic year. International students are provided an out-of-state tuition waiver with their assistantship appointment throughout their academic career.

## Tuition Flex Waiver

In place of the ABD waiver, the Graduate School has the tuition flex waiver. Tuition flex waivers will remain available when connected to sponsored funding. Unlike ABD waivers, flex waivers are associated with specific grants or projects rather than individual students. These waivers are requested through a commitment request submitted to the Graduate School and must include clear and sufficient justification for approval. More information can be found on the website: [Tuition Flex Waiver Website](#) Any assistance needed, contact the Graduate Program Coordinator.

## Graduate Assistant Medical Insurance

Information regarding Insurance Benefits can be found at the following link:

<https://gradschool.wsu.edu/graduate-assistant-medical-insurance/>

<https://cougarhealth.wsu.edu/studentinsurance/graduate-students/>

<https://cougarhealth.wsu.edu/vision-clinic/>

## Insurance for Spouse/Domestic Partner and Dependents

Spouses, domestic partners, and children may be enrolled at your request. Dependents can only be enrolled in the medical insurance. They are not eligible for dental insurance. Dependents enrollment must be completed every semester. To enroll your dependents, please complete the dependent enrollment form. To add a spouse or domestic partner, please complete the Declaration of Marriage or Domestic Partnership. Declaration only needs to be filled out one time per year unless you've had changes. The enrollment/cancellation deadline is the 13<sup>th</sup> day of classes for the fall and spring semesters and the 5<sup>th</sup> day of classes for the summer sessions. All forms needed can be found here: <https://cougarhealth.wsu.edu/billing-and-insurance/student-insurance/graduate-student-assistant-insurance/>

## Graduate Student Assistantship Leave

1. During the term of their appointments, all graduate student service appointees are given an allotted amount of sick and vacation time, please refer to the [Collective Bargaining Agreement](#) specifically articles 28 and 30.
2. All University holidays are published in the academic calendar

**ADDITIONAL LEAVE GUIDELINES** - Specific to Pharmaceutical Sciences PhD Program

All planned and unplanned absences require approval from the student's Research Advisor/Mentor. Teaching Assistants must have approval of all professors for whom s/he serves as a TA if the planned absence is during the time that classes are in session. All absences must be reported to the program coordinator via the absence form.

### Graduate Student Leave of Absence

Graduate leave status is granted for individuals who must be away from their studies for one or more semesters for personal, family, job, financial, military or Peace Corps service, or other compelling reasons. ***Only graduate leave for medical reasons [Emergency Family/Medical Leave (EFML)], military service, and Peace Corps service is available to doctoral students in continuous doctoral status.*** Students should consult the WSU Graduate School Policies and Procedures manual for information regarding the types of leave available.

1. Students must apply for graduate leave by filling out the graduate leave form and submitting to the program coordinator. The coordinator will submit the form to the Graduate School. The form can be found here: <https://gradschool.wsu.edu/forms/>
2. The leave must be approved by the student's Advisor/Mentor, Associate Dean of Research & Graduate Education, International Programs (for international F-1/J-1 students only) and Dean of the Graduate School. A student may be on graduate leave for a total of up to one calendar year during their studies but leave time may be extended for special circumstances (e.g., for military or Peace Corps service). ***Graduate leave beyond one calendar year during a student's studies is not guaranteed.***
3. Graduate leave entitles students to maintain access to library services if needed. At the end of the leave, the student may reenroll for credits without completing the reenrollment form or paying the reenrollment fee. International students must submit information on their finances to the Graduate School if they require issuance of new immigration documents (Form I-20/DS-2019).

### Short-term Pregnancy/Parental Leave

The Short-term Pregnancy/Parental Leave plan provides up to six consecutive weeks of leave for the period directly before or after the birth or adoption of a child. During this time, the student continues to be enrolled and maintains their status as a full-time student. Students should consult the WSU Graduate School Policies and Procedures manual and the Graduate Program Coordinator for information.

### Society Memberships and Scientific Meetings

Students are highly encouraged to join and participate in a professional society (e.g., AAPS, APS, ASCPT, ASPET, ISSX, SOT). These societies frequently offer travel fellowships or other financial support to their members.

Students will be encouraged to attend national scientific meetings as travel support permits. Priority for travel support will be given to students presenting their science at national meetings. Students should discuss participation in meetings and travel support with their research advisor. Students may also apply for travel funds from the CPPS and ASWSU. The CPPS requires a travel budget, matching travel funds from your research advisor and an updated CV, which is sent to the program coordinator.

### College of Pharmacy Travel Grants

<https://pharmacy.wsu.edu/financeoffice/student-travel-grants/>

### ASWSU Travel Grants

<https://spokane.wsu.edu/studentinvolvement/aswsuhs/aswsuhs-committees/>

## Graduate Student Safety

WSU has made a commitment to maintaining a safe and secure environment for all students and as such, has created a campus-wide, integrated safety program to address potential safety issues students may encounter during their time at WSU. This proactive approach partners University infrastructure, University policies, and formal safety training for students to become aware of potential dangers, know how to protect themselves, and to know where to access safety information. It will be your responsibility as a student to complete required training, stay well informed regarding safety issues, educate yourself when faced with job specific hazards, follow University safety policies, and use prudent judgment in unanticipated situations.

### Mandatory Trainings

**Online:** All online trainings are currently available through Percipio. [Click here to be redirected to the WSU Skillsoft Percipio webpage](#). These trainings can be found by the search bar. Once you've logged in, click on the search bar in the top of the screen and type in the training below. Once completed, students will forward the completion certificate to the program coordinator at [pharmacy.gradprog@wsu.edu](mailto:pharmacy.gradprog@wsu.edu)

- Discrimination, Sexual Harassment, and Sexual Misconduct Prevention – Annual Training
- Bloodborne Pathogens (BBP)
- Hazard Communication
- Emergency and Fire Preparedness
- Personal Protective Equipment Fundamentals
- Research Conduct (RCR must be complete before your assistantship can go through) [CITI Training Resources | Office of Research Support and Operations | Washington State University \(wsu.edu\)](#)

There are also training items for biosafety, sharps safety, autoclave safety, slips trips and falls, etc., which may be applicable to your research – and – can choose to complete on your own. These can be found under the library icon in the upper left corner of the screen.

*In-Person:* All in-person trainings are scheduled during orientation week.

- Animal Handling/Ethics Overview
- Lab Safety Training
- Nuclear Magnetic Resonance (NMR) CORE
- Genomics CORE
- Histology and Service Centers (Bioengineering and Design, Flow, Microscopy & Imaging and Liquid Chromatography and Mass Spectrometry)
- Human Subject Research – CITI Training
- Professionalism Training

Some important reminders on online trainings:

The WSU Graduate School requires all graduate students to complete the Responsible Conduct of Research online training, which takes about 20 minutes (<https://myresearch.wsu.edu/>). Students awarded an assistantship must take the training before their appointment paperwork can be processed. International Students awarded an assistantship will have a grace period of one semester to complete the training. Please log in to MyResearch to begin your Responsible Conduct of Research training. Once you are logged in click the “training” icon and then “mandatory training.”

The training will need to be repeated after a five-year period. Students will not be eligible for an assistantship until after the training is completed unless otherwise noted. Should a student take the training late in the semester, and the assistantship is processed late, the student will be responsible for paying all late fees applied to the student’s account before the waiver(s) are applied to the student account.

In addition, mandatory training on **discrimination and sexual harassment prevention is required of all graduate students on assistantships.**

Students are encouraged to take this training as soon as possible, but at least by the following deadlines:

- Graduate students appointed fall semester will need to complete their training by **September 30th.**
- Graduate students appointed spring semester will need to complete their training by **January 31st.**
- Graduate students appointed summer semester will need to complete their training by **June 30th.**

**Failure to fully complete this training may result in future ineligibility of any financial support or benefit of your appointment.** All students on assistantships will be required to repeat this training annually from the date of initial training. Questions regarding this training may be directed to Human Resources Services at 509-335-4521 or [hrs@wsu.edu](mailto:hrs@wsu.edu).

Questions about sexual harassment or discrimination can be directed to the Office of Equal Opportunity (OEO) at 509-335-8288 or [oeo@wsu.edu](mailto:oeo@wsu.edu). Certain computer configurations are required by the training system. Learn about specific issues and resolve them through the browser capabilities check at <http://browser.skillport.com/>

Student may review their completion of training by logging into their Percipio account, selecting the "*view assignments*" button in the middle of the screen, and selecting the "*completed*" tab for a list of their training history (**note** the date range criteria above the "completed" tab) and then clicking on the red ribbon icon if they would like to print a certificate of completion.

### The Office of Emergency Management

<https://spokane.wsu.edu/emergency-management/> contains important safety information as well as instructions for you to register your contact information for emergency notifications. It is highly recommended that you register as soon as you arrive. Please familiarize yourself with locations of safety equipment, emergency exits, and evacuation procedures for every building you will work in.

Emergency Sites, Medical Emergency Protocol and more:

<https://spokane.wsu.edu/emergency-management/emergency-procedures/>

**Alert Sign-up:** To receive the Alerts you must sign up: 1. Go to **myWSU**. 2. Log in using your WSU computer User ID and Password 3. Click "Profile" 4. Click "Emergency Notification" 5. Follow the instructions to supply contact information on the form.

Office of Research: <https://pharmacy.wsu.edu/research/>

Laboratory Safety: <https://spokane.wsu.edu/research/lab-safety/>

Core Facilities: <https://spokane.wsu.edu/research/core-facilities/>

Environment Health and Safety: <https://spokane.wsu.edu/facilities/environmental-health-and-safety/>

Most scientific research laboratories have a number of workplace hazards specifically associated with the materials and equipment involved in the projects. Each laboratory is required to follow University safety policies and procedures which address the safe handling and personal protection from these hazards. However, certain procedures or techniques may be specific to your laboratory projects, so it is expected that you will familiarize yourself with these hazards and follow all policies for the appropriate handling, storage, and disposal of any materials or products considered hazardous by the University.

### Student Care Network

WSU's Student Care Network is dedicated to supporting student success across the system through access to resources and early intervention. Each WSU location has a designated

Student Care Team comprised of professionals who can recommend appropriate resources and services that can help students succeed.

### Submitting A Care Network Referral

The Student Care Network can help when you have a concern about yourself or another student's well-being, behavior, academic performance, or their access to financial, food or housing assistance. Referrals can be made through the website:

<https://www.studentcare.wsu.edu/> The appropriate resources will contact whoever submitted the form to gather additional information, talk about the situation, and identify next steps. Reports may also be submitted anonymously.

## Doctor Of Philosophy (PhD) Pharmaceutical Sciences and Molecular Medicine Curriculum

### WSU Graduate School Degree Requirements (PhD)

Consult the [Graduate School Policies & Procedures Manual](#) for general requirements for the PhD degree.

The following are general degree requirements for all graduate students at WSU. Program requirements for graduation are those in effect at the time the graduate student files his/her Program of Study:

- 72 hours minimum total credits
- 20 hours minimum 800-level research credits
- 9 hours maximum of non-graduate courses
- An audit cannot be used for the Program of Study

Any course graded S/F or P/F may not be used as graded course work. Any course listed on the student's Program of Study in which a grade of "C- "or below is earned must be repeated for graded credit. Courses for audit may not be used for the program of study.

### PhD Program Requirements

The following are specific degree requirements for students in Pharmaceutical Sciences. They meet the general Graduate School requirements stated above. Students are required to complete 24 graded credits (13 required, 11 elective) within the program. Below are the required and elective courses we offer.

### REQUIRED CORE COURSES

PharmSci 520	Foundations of Molecular and Cellular Regulations	4 credits
PharmSci 577	Responsible Conduct in Biomedical Research	3 credits

PharmSci 578	Applied Biostatistics	3 credits
PharmSci 579	Principles of Pharmacology	3 credits
PharmSci 597	CPPS Graduate Seminar	1 credit (S/F)
PharmSci 800	Doctoral Research	Variable, 20 hrs minimum

## ELECTIVES

A minimum of 11 credits from the following:

PharmSci 512	Topics in Pharmacology	Variable
PharmSci 590	Journal Club	1 credit (S/F)
PharmSci 560	Molecular and Cellular Methods in Biomedical Sciences	3 credits
PharmSci 565	Drug Delivery	3 credits
PharmMeds544	Toxicology: Assessing Drug Side Effects	3 credits
PharmSci 571	Computer-Aided Drug Design	3 credits
PharmSci 572	Fundamentals of Oncology	3 credits
PharmSci 573	Principles of Pharmacokinetics and Toxicokinetic	3 credits
PharmSci 576	Biophysical Methods	3 credits

## APPROVED OTHER SUGGESTED ELECTIVES

MBioS 503	Advanced Molecular Biology 1	3 credits
MBioS 548	Selected Topics in Immunology & Virology	1 credit
MBioS 578	Bioinformatics	3 credits
Neuro 520	Fundamentals of Neuroscience	4 credits
Phil 530	Bioethics	2 credits
Chem 543	Bioorganic and Medicinal Chemistry	3 credits
Chem 544	Advanced Topics in Organic Chemistry	Variable
Transfer Courses	Course transferred from another institution must be approved by the program curriculum committee and the Graduate School.	Variable cr.

In addition to fulfilling the required courses, students are allowed to develop an academic program that best relates to their scholarly and research needs by taking approved courses offered at WSU. The student must consult with their temporary or permanent advisor before enrolling in courses. Their course enrollment will also be audited by the Graduate Program Coordinator.

*Note: All full-time doctoral degree students must register for at least one research credit of PharmSci 800 each semester (excluding summers) to track faculty advisor effort.*

*The student may request to the Graduate Program Director and Coordinator to substitute appropriate courses from other departments that do not appear on the "Approved Other Suggested Electives" list.* In selecting elective courses, the student and Research Advisor/Mentor should consider the student's area of emphasis in the program and consult the recommendations of his/her committee for a Program of Study in that area. The student must have approval from his/her committee to substitute courses before requesting the substitution to the Graduate Program Director and Coordinator.

### Transfer Credits

Students transferring to WSU from another institution must meet additional requirements. While some credit can be transferred, with permission of the Graduate Curriculum Committee and the Graduate School, at least half of the graded credits must be taken at WSU. The minimum of 20 hours of 800 credit must still be met. *The student may petition to the Graduate Curriculum Committee to substitute appropriate courses from previous institutions. If a student wishes to try to obtain credit via transfer courses, the Graduate Program Coordinator should be notified immediately to start the process.*

### Program Advising

Students will be advised each semester during their first two years in the program, and thereafter as needed. Students will be advised by the Graduate Program Coordinator until they have selected their permanent Research Advisor/Mentor, who will then perform advising. Advising in the first semester will include information on available courses and mentors for rotations, along with general WSU information. Advising in the second semester will focus on the student's progress in identifying a permanent Research Advisor/Mentor. Advising in the third semester will focus on filing of the Program of Study, and preparation for the preliminary exam. Advising in the fourth semester will largely concern the logistics of the preliminary exam, to ensure that deadlines are met.

### Rotations

The aim of the rotation program is to provide an opportunity for incoming graduate students to familiarize themselves with the research interests, laboratory procedures and instrumentation of the Graduate Program in Pharmaceutical Sciences faculty and their research laboratories. The rotation program also creates an opportunity for new students to interact with other graduate students and staff. The ultimate goal of the rotation program is to help new students make the best decision regarding which faculty Research Advisor/Mentor and research setting to select for the pursuit of their graduate studies. This program also provides the graduate program faculty with an opportunity to become acquainted with new graduate students. Finally, completing more than one rotation offers an avenue for learning a variety of research methods and experimental approaches, which expands the breadth and depth of knowledge acquired while in graduate school.

## Selection of Laboratory Rotation Advisor(s)

Students will be advised by the Graduate Program Coordinator during online and in-person orientation on lab rotations. Prior to arriving on campus, students will have an opportunity to learn more about each of the faculty members regarding their research and will be asked to select a first, second and third choice for their rotation. During in-person orientation, the students will meet faculty members individually to receive a tour of the lab, meet lab members and determine if both parties are in agreement for a rotation. The Graduate Program Coordinator then makes assignments based on the faculty and student feedback and students will be notified.

Students must participate in *at least two* research rotations. A rotation contract will be submitted once a rotation has been assigned. Students are expected to select a permanent research advisor/mentor upon completion of their second research rotation. At the end of each rotation, the students' research performance will be reviewed by the rotation advisor. Third rotations are not guaranteed, and require a special exception request that must go through the Associate Dean of Research and Graduate Education and the Graduate Program Coordinator.

**First rotation: 1<sup>st</sup> semester - 15 weeks**

**Second rotation: 2<sup>nd</sup> semester – 15 weeks**

**Third rotation: summer semester (ONLY under special circumstances)**

By the end of a student's second semester, a student must have established a mentor and a lab, otherwise the student may be subject to termination from the program, due to not being in good program standing.

## Rotation Expectations

The purpose of a Research Rotation is to:

1. Experience different research environments.
2. Identify a suitable mentor and area of research.
3. Give potential mentors an opportunity to evaluate you as a trainee in their research program.
4. Develop research skills including the generation of a high-quality laboratory notebook that documents daily progress in the candidate's research project.
5. Perform research that may contribute to the productivity of the lab and may result in a publication.

As a student you will generally be expected to work semi-independently on a rotation project. This does not necessarily mean that you will be required to generate a hypothesis,

test it and interpret the data on your own. What it does mean is that you will be expected to do the following:

1. Take the initiative to learn, which includes asking questions, reading, talking to other researchers, and thinking on your own.
2. Communicate your plans and the times you will be available for your research rotation.
3. Attend research-related meetings, seminars and journal clubs if the professor requests you do so.

All graduate students are to enroll in at least 1 credit of PharmSci 800 research course for their individual rotations for both Fall and Spring semesters. Per the WSU Academic Regulations Policy 28 (<https://registrar.wsu.edu/academic-regulations/>) 1 credit hour = 45 hours total or 3 hours per week of laboratory work during the semester.

During the academic year, it is reasonable to spend a minimum of 15 hrs. /week on your rotation project. You cannot learn about a research environment or hope to conduct experiments and answer a particular question if you dedicate less than this minimum time to a project. This time is considered in addition to RA time and research credit.

Students must make a diligent effort to identify a suitable Research Advisor/Mentor through rotations. Students who are struggling to identify a suitable Research Advisor/Mentor should meet with the Associate Dean of Research and Graduate Education to discuss their research interests. Students who fail to make sufficient effort towards identifying a Research Advisor/Mentor within the first year and do not submit the Research Advisor/Mentor Agreement Form by the end of their second semester will be required to meet with the Graduate Program Coordinator to discuss their progress toward their degree. A third and final rotation can be undertaken in the summer following the first year, with permission of the Associate Dean of Research and Graduate Education.

### Process for a Third Rotation Exception

If a student is requesting a third rotation, they need to meet with the Graduate Program Coordinator by the 9<sup>th</sup> week of the preceding semester. This meeting will entail discussing why the prior rotations were not a match, who the student is interested in rotating with, the process of matching and approval. Following this meeting, the coordinator will discuss with the Associate Dean of Research and Graduate Education and a decision will be made. If approved, the coordinator will work with the student to set up appropriate meetings with the faculty and move forward with the normal rotation process.

### Rotation Contract

Within one week of starting a rotation the student and rotation advisor must submit a rotation contract to the Graduate Program Coordinator. This information will be reviewed and placed in each student's file. Forms can be found online or by the Graduate Program Coordinator.

The faculty member, in consultation with the student, will provide the following information for each rotation:

- a. The name of faculty member supervising the rotation.
- b. Beginning and ending dates of the rotation.
- c. Title, general outline of the project, and agreed upon expectations.

### Rotation Evaluation

At the end of each rotation, the student and rotation advisor will complete the PhD Research Rotation Review Form. This review will be the basis for the grade given to the student. The Graduate Program Coordinator will provide the student with the electronic form. All reviews must be submitted to the Graduate Program Coordinator no later than two weeks after the rotation ends.

## Selection of a Permanent Advisor/Mentor

### Advising Agreement

Once a student and a faculty member have reached a mutual understanding that the student will pursue their dissertation work in that faculty member's lab, an internal Graduate Program in Pharmaceutical Sciences form "Permanent Advisor/Mentor and Initial Program of Study Agreement Form" will be filled out and signed by the student, advisor, and Associate Dean of Research and Graduate Education. This form will list the tentative coursework that the student will be taking to fulfill degree requirements, as a prelude to eventual completion of the Program of Study. It will represent a written agreement between the student and their advisor and will become a permanent part of the student's file. Before signing the form, the Associate Dean of Research and Graduate Education will confer as necessary with the Chair of the Department of Pharmaceutical Sciences and the Dean of the College of Pharmacy and Pharmaceutical Sciences to establish that there is the potential for continued funding of the student's research.

The Research Advisor/Mentor must be an active member of the Pharmaceutical Sciences graduate faculty who can potentially fund the student's stipend. Affiliate faculty from another college can serve as the Research Advisor/Mentor for graduate students, with the permission of the Dean of the College of Pharmacy and Pharmaceutical Sciences along with the other Dean involved. A Memorandum of Understanding (MOU) will be developed for each student mentored by an affiliate faculty member, providing details concerning financial support of the student's stipend. This MOU will be signed by both Deans. There are limitations on the roles that can be held by graduate faculty who do not hold doctoral degrees. ***It is the student's responsibility to select a permanent Research Advisor/Mentor and other committee members for his/her program. Note that WSU faculty have the right to decline to serve on any specific student's committee.***

## Responsibilities of Permanent Research Advisor/Mentor

1. In the capacity as academic advisor, assist the graduate student in planning the program of study, referring the student to the Graduate Program Coordinator as appropriate.
2. Assist with dissertation committee selection.
3. Provide guidance to the graduate student for the student's examinations.
4. Provide the student with a secure environment (facilities, laboratory, financial) that allows the student to achieve program outcomes.
5. Mentor the student on the research process, including experimental design and performance, statistical analysis, review of the literature, writing up papers, preparing grant proposals, and preparing seminars. Encourage early steps toward the development of independence.
6. Mentor the student in the financial and administrative conduct of research.
7. Evaluate the graduate student's performance on an annual basis in conjunction with the administrative chair of the student's committee and provide regular feedback to the student regarding progress.
8. Support the student's efforts to develop career-related skills (e.g., mentoring of more junior students; outreach activities; writing and reviewing experience).
9. Assist the student in the pursuit of the student's future career by providing letters of reference.

## Dissolution of Advising Agreement

On occasion, it will be necessary to dissolve the advising agreement. For example, the Research Advisor/Mentor may move to another institution, or there may be a decision made that the student would be more successful working with another advisor. In this case, the student and advisor will complete the dissolution form, after consultation with the Graduate Program Coordinator. The form will be signed by the student, advisor, and the Associate Dean of Research and Graduate Education.

## Change of Advisor Agreement

On occasion, a student may need to change the student's Research Advisor/Mentor. After completion of the Dissolution of Advising Agreement, the student and new advisor will complete a Memorandum of Understanding that lays out the expectations for the student's performance. The memorandum will be signed by the student, the new Research Advisor/Mentor, and Associate Dean of Research and Graduate Education. The following elements need to be addressed in this memo:

- If the change occurs in the middle of an academic semester, how will the student's grade for research credits be determined at the end of the semester?

- How long will the student work with the new advisor before a new Advising Agreement is completed?
- Will the student need to meet certain expectations before this agreement is completed?
- When will the student be expected to complete their new Program of Study?
- When will the student be expected to defend their Preliminary Exam?

## Selection of Dissertation (PhD) Committee

By October 1 of the third semester, students should choose and be accepted by their committee members, and file their Program of Study: <https://gradschool.wsu.edu/forms/>

The program of study is an official form documenting the student's plan of courses to take, milestones required by the department/program, as well as indicating research interests. The program of study should be submitted to the Graduate School during the third semester of study, and no later than the semester before the student anticipates taking the preliminary examination (October 1 deadline for fall; March 1 deadline for spring). The student's advisor, in consultation with suggested advisory committee members, should aid the student in the development of the proposed program of study.

Students are required to meet with their dissertation committee at least once per year. It is recommended that students meet twice during the year the committee is formed. The first meeting is to introduce yourself and your thesis project. The second meeting is to ask for permission to do your preliminary exam.

## Selection of Administrative Chair

The student, research advisor/mentor, and Associate Dean of Research and Graduate Education will confer on the selection of an administrative chair, who will subsequently be appointed by the Associate Dean of Research and Graduate Education for the student's committee. The administrative chair of a student's committee shall be an active Graduate Program in Pharmaceutical Sciences graduate faculty member, at or above the level of Associate Professor, and cannot be the student's research advisor/mentor. Note that the administrative chair is an internal requirement only for students in the Graduate Program in Pharmaceutical Sciences; all official documents to be submitted to the Graduate School must list the research advisor/mentor as chair.

## Responsibilities of the Administrative Chair

1. Responsible for all administrative aspects associated with the graduate student's committee including committee composition and readiness for preliminary exam or doctoral defense.
2. Where necessary, assist with mentoring the student when the student's research advisor/mentor is an Assistant Professor.

3. Resolve any conflict issues, in consultation with the Associate Dean of Research and Graduate Education and Graduate Program Coordinator.
4. Evaluate the graduate student's performance on an annual basis in conjunction with the student's research advisor/mentor.

### Selection of Additional Committee Members

Additional committee members should be determined jointly by the student, the research advisor/mentor and the administrative chair. More information on committee formation can be found here: [Graduate School Policies & Procedures](#)

1. Committees must include at least three current members of the Faculty of the Graduate School
2. At least three of the members must be members of the graduate faculty at WSU. There must be two members from the Graduate Program in Pharmaceutical Sciences & Molecular Medicine graduate faculty.
3. If a student would like to add an external committee member, the student needs to contact the Graduate Program Coordinator as soon as possible for the process.
4. It is imperative to avoid situations that may constitute, or may be construed as, a conflict of interest when forming a graduate student's committee.
5. Final approval of the committee membership is at the discretion of the Associate Dean of Research and Graduate Education.
6. The Associate Dean of Research and Graduate Education must sign the necessary Graduate School forms on behalf of the Graduate Program in Pharmaceutical Sciences, and this must be coordinated through the Graduate Program Coordinator.
7. The initial selection of or subsequent changes to, a graduate student's committee shall be determined jointly by the student, administrative chair and research advisor/mentor with final approval by the Associate Dean of Research and Graduate Education.
8. In accordance with the *Graduate School Policies and Procedures Manual at WSU*, graduate students are not permitted to serve on the committees of other graduate students.

### Role of Dissertation Committee

1. Monitor progress of student.
2. Approve advancement of student to take preliminary and final exam.
3. Provide advice and guidance with respect to research direction and degree completion.

## Examinations

### Preparation for the Examinations

In collaboration with the research advisor/mentor and administrative chair (for PhD), the student must declare his/her intention in writing to the Graduate School to take the preliminary or final examination. The deadlines for submission of the required forms to the Graduate School are provided as a download from the Graduate School website: [Deadlines and Procedures for Doctoral Degrees](#) Please consult with the Graduate Program Coordinator.

### DOCTORAL DEGREE

The preliminary and final examinations are required by the Graduate School and are described in the [Graduate School Policies and Procedures Manual](#)

### Preliminary Examination

A preliminary examination is required of each doctoral student for advancement to candidacy for the doctoral degree. A preliminary doctoral examination is designed to determine the fitness of the student for pursuing a doctoral program in the chosen field.

The preliminary examination will be divided into two parts. Part A will consist of writing a proposal on the student's research. The objective of the proposal is to provide a mechanism that challenges the student to: 1) think at a high level of scientific maturity about their dissertation project and 2) become familiar with different methodologies and approaches. The student should demonstrate an understanding and familiarity of the relevant literature, develop a testable hypothesis and propose well-defined aims with an appropriate experimental plan.

The student is highly encouraged while developing the proposal, experimental design and presentation to have extensive interactions with his/her advisor, laboratory members, committee members and other faculty. However, it is expected that the student will write the proposal independently and then present it to his/her advisor for approval or revision. Note that proposals must not be paraphrased versions of or copied from the advisor's grant applications or published papers.

Once approved by the advisor, the student will present the written proposal to the entire committee for approval or revision. Presentation of the written proposal does not necessarily require a meeting of the committee, as the proposal can be discussed/approved via electronic communication. Once the proposal is approved by the committee, the student can proceed to Part B, the formal preliminary examination scheduled by the Graduate School.

The preliminary exam must be scheduled through the graduate program coordinator and completed no later than the end of the spring semester of the student's second year in the program. Note that the scheduling process is multifaceted and can often take months as outlined below. It is the student's responsibility to begin preparations and consult with the

research advisor/mentor and program coordinator as early as possible (i.e. in the fall semester of their second year at the very latest) to ensure that the following are completed: composition of the student's committee, identification of an administrative chair, submission and approval of the program of study, and coordination with all committee members to identify potential dates and times for Part B of the examination.

### Preliminary Exam Policies

All preliminary exam policies can be found under *Doctoral Degree Requirements* and then *Preliminary Exam Policies in the [Graduate School Policies & Procedures](#)*. Students should read each part of the preliminary exam policies carefully and any questions can be directed to the graduate program coordinator.

### Examination Process

Per the Graduate School, the content and conduct of the preliminary examination are the responsibility of the faculty of the degree-granting program and the process should be outlined in the program's Graduate Student Handbook. The process must be consistent with the guidelines outlined in the preliminary exam policies.

**PART A.** This will consist of the student writing a hypothesis-driven proposal modeled after an individual F31 Predoctoral NIH Ruth L. Kirschstein National Research Service Award (NRSA) Fellowship proposal. See: <https://grants.nih.gov/grants/guide/pa-files/PA-11-111.html>

For Fellowship Application Guide see the following:

**Format Details (see page I-21): Use Arial font size 11 point (a Symbol font may be used to insert a Greek letter or other special character). Use standard paper size, single spacing and one-half inch margins all around. Number each page, centered at the bottom of each page.**

### *Proposal Details*

The proposal will contain the following components:

1. Your name.
2. Descriptive title of the proposal (81-character limit).
3. Project summary/abstract (see page NIH instructions for description). This section must be no longer than 30 lines of text and conform to font and margin specifications.
4. Specific aims (see NIH instructions for description). Limited to ONE page.
5. Research strategy (see I-85 for description). Limited to EIGHT pages (two more than NRSA). The research strategy will be divided into significance and approach sections. The approach will include the research design and any preliminary results.

**A majority of the committee members must approve the proposal and designate their approval by signing the scheduling form for the preliminary exam.**

**PART B.** Once Part A is approved, the student schedules his/her formal preliminary examination with the Graduate School (in accordance with the Graduate School deadlines). Please note that you can schedule with the Graduate Program Coordinator your date internally before this official form is submitted. This is to ensure we do not have any conflicts with your date.

The preliminary exam will consist of a one-hour research seminar presentation including background, the student's research to date, and the proposed research plan. This is a pass/fail examination. The student's performance will be assessed with respect to the following outcomes:

- 1) Demonstrate mastery of knowledge in the field of study.
- 2) State the research problem in such a way that it clearly fits with the context of the literature in an area of study.
- 3) Provide a sound plan for applying appropriate research methods/tools to solving the research problem and show a good understanding of how to use the methods/tools effectively.
- 4) Provide a sound plan for analyzing and interpreting research data.
- 5) Communicate the research proposal clearly and professionally in both written and oral forms.
- 6) Demonstrate capability for independent research in the area of study and the ability to make an original contribution to the field.

The deliberations of the committee will include assessment of these outcomes but may also include other considerations. An exam survey will be completed and submitted to the Graduate Program Coordinator by the Administrative Chair.

The exam is intended to help the student expand their critical thinking skills regarding experimental design and methodological approaches and provides a forum for interactions with dissertation committee members and other faculty for further academic development. Any member of the Graduate Program in Pharmaceutical Sciences faculty can attend the exam and question the student. **The student will give a public research proposal seminar that consists of a 45-minutes presentation followed by a 15-minutes period of questions and answers. The committee will then conduct a rigorous oral examination of up to 2 hours in length and can ask questions pertaining to the proposal, the seminar or any other aspect related to the student's training.**

## Logistics

The student must schedule the examination with the Graduate School, through the graduate program coordinator. The student will provide the Graduate Program in Pharmaceutical Sciences with the date, time, location, proposal title and names of the committee members at least two weeks in advance of the exam. The student must provide a copy of the completed/approved preliminary exam scheduling form to the graduate program coordinator, who will file the form with the Graduate School. The Associate Dean of Research and Graduate Education must sign the form before it is submitted to the Graduate School.

The exam must be held on the WSU Spokane campus unless an exception is granted by the Associate Dean of Research and Graduate Education. All graduate faculty members of the Graduate Program in Pharmaceutical Sciences will be notified of the time and place of the examination and are entitled to attend and vote according to Graduate School regulations. The meeting will be chaired by the administrative chair of the student's advisory committee. All committee members **must** be in attendance for the entire examination and must vote. Any other faculty members wishing to vote must also be in attendance for the entire examination. A member of the WSU Graduate Mentor Academy may be requested to attend the preliminary exam by the student, committee member, or other Graduate Program in Pharmaceutical Sciences faculty members. Satisfactory completion of the preliminary examination will advance the student to PhD candidacy.

In the event of a failed examination, a student will be re-examined for a second and final attempt. More information can be found in the preliminary exam policies.

## Final Examination

A candidate for a doctoral degree must pass a final oral examination that primarily shall be a defense of the dissertation but may cover the general fields of knowledge pertinent to the degree. The student must register for a minimum of 2 (two) hours of 800 level credits at the beginning of the semester or summer session in which the final examination is to be taken. Final examinations will include discussion of the completed dissertation (which is suitable in format and content for submission to the library). Under extraordinary circumstances, on the recommendation of the student's committee and Associate Dean of Research and Graduate Education, the Dean of the Graduate School may approve alternative arrangements. The final examination must be scheduled through the graduate program coordinator.

## Doctoral Final Exam Policies

The final doctoral examination should not exceed *two and one-half hours* (including the student's seminar presentation). All final exam policies can be found under *Doctoral Degree Requirements* and then *Doctoral Final Exam Policies in the [Graduate School Policies & Procedures](#)*. Students should read each part of the final exam policies carefully and any questions can be directed to the graduate program coordinator.

## Ph.D. Dissertation Format

The PhD dissertation must meet the requirements of the WSU Graduate School which can be found under the Graduate School Policies and Procedures, *Chapter Six, Submitting the Final Thesis or Dissertation to the Graduate School*.

In addition, the following guidelines have been established by the Graduate Program in Pharmaceutical Sciences.

1. A PhD dissertation is a specialized document that summarizes the work performed by a student during their doctoral studies. It is intended to demonstrate their scholarly expertise in their field of study. The expectation of the dissertation committee and the Pharmaceutical Sciences & Molecular Medicine graduate program faculty is that the student will devote significant effort to writing the dissertation, and in preparing for its defense.
2. It is not necessary to include in a dissertation all of the work that the student has completed during the course of the student's training. Rather, the goal is to prepare a cohesive document that addresses a specific area of research in a scholarly manner. Unpublished data can be, and usually are, included in a PhD dissertation.
3. To more fully reflect all of the students' publications and accomplishments, a section concerning "Other achievements/publications" can be included at the end of the introductory chapter. This section could, for example, include a list of publications generated during the PhD work but not included in the dissertation. Significant awards (e.g., NSF or NIH fellowship) could also be mentioned here.
4. The introduction to the dissertation is typically 5-10 pages in length but may be longer. It introduces the reader to the area being researched, so that the reader can understand the chapters that follow. The introductory chapter typically concludes with a paragraph or two explaining gaps in knowledge that were being filled, the overall hypothesis being addressed, the specific aims of the project (if appropriate) and the general approach that was taken to test the project hypothesis.
5. If the student has published review articles that are directly relevant to the dissertation, and the dissertation committee agrees that this material should be included in the dissertation, this material should either be incorporated into the introduction or included as a separate chapter following the introduction.
6. The dissertation is intended to be an integrated document in which the various chapters flow in logical order, with one leading to the next. This can be accomplished by adding a few lines of appropriate text to the end of a preceding chapter, and/or to the beginning of the following chapter, to provide continuity. A non-integrated document may be accepted but only with the unanimous consent of the student's committee.

7. If the student has co-authored published papers in which others performed portions of the work, the Research Advisor/Mentor must provide assurance to the dissertation committee that the majority of the work was performed by the degree candidate, and that figures from the dissertation will not be duplicated in the dissertation for any other degree candidate.
8. When published papers are included in the dissertation, they should be re-formatted (font style, reference style, etc.) to match the rest of the dissertation chapters. Portions of the text needed only to meet journal requirements (e.g., key words, corresponding author, and phone numbers) should not be included in the dissertation chapter.
9. The figures in a dissertation are typically placed on a separate page immediately following the text in which they are discussed. Placing all figures at the end of the chapter makes it more difficult for the reader to interpret the work and is not recommended. It can however be done with the approval of the dissertation committee.
10. The references are typically grouped together at the end of the dissertation but can follow each chapter if the committee prefers this format. Grouping them together at the end avoids the unnecessary repetition of references from one chapter to the next.
11. The concluding chapter of a dissertation is extremely important and helps to prepare the student for a successful defense. This chapter, which is typically about 5 pages in length but can be longer, should briefly summarize the major findings of the dissertation. Following the summary, the student should speculate on how the work fits into the larger literature in its field, limitations of the study as presented, where this area of research is heading in the future, which aspects of the work could be addressed in the future using alternative approaches.
12. The abstract for a dissertation is a condensed summary of the dissertation work. Like the abstract for a manuscript, it should include a very brief introduction, mention the research approaches used in the dissertation work, and then briefly summarize the major findings of this work.

The dissertation committee is provided with at least two opportunities to provide feedback on the content of the dissertation. The first is in the period between the time that the draft of the dissertation is distributed to the committee and when the defense scheduling form is signed. The second is after the defense, and before the time when the final dissertation must be submitted to the Graduate School. Some committee members will ask for no revisions, while others may ask for substantial revisions. Students need to plan accordingly, so that they have time to address the concerns during the revision periods.

## Examination Process

The standard process for the doctoral final examination varies across disciplines and programs. Per the Graduate School, the policies and procedures established for final exams by a graduate program should be outlined in the program's Graduate Student Handbook and must adhere to the guidelines outlined in the final exam policies.

**PART A.** This part will consist of the student submitting their final dissertation manuscript to their committee for review. **A majority of the committee members must approve the manuscript and designate their approval by signing the scheduling form for the final exam.**

**PART B.** Once Part A is approved, the student schedules his/her formal final defense examination with the Graduate School (in accordance with the Graduate School deadlines). Please note that you can schedule with the Graduate Program Coordinator your date internally before this official form is submitted. This is to ensure we do not have any conflicts with your date.

The student's performance will be assessed with respect to the following outcomes:

- 1) Demonstrate mastery of knowledge and a high level of expertise in the field of study.
- 2) Reviews the literature in a way that demonstrates comprehensive knowledge of previous and current research in the field of study.
- 3) States the research problem in such a way that it clearly fits within the context of the literature in an area of study.
- 4) Demonstrates the potential value of the solution to the research problem in advancing knowledge within the area of study.
- 5) Applies sound and appropriate research methods/tools to problems in an area of study and describes the methods/tools effectively.
- 6) Performs appropriate statistical analyses of research data and presents the results in a way that makes clear sense of the data.
- 7) Communicates research clearly and professionally in both written and oral forms.
- 8) Has demonstrated capability for independent research in the area of study and is making an original contribution to the field.

The deliberations of the committee will include assessment of these outcomes but may also include other considerations. An exam survey will be completed and submitted to the Graduate Program Coordinator by the Administrative Chair.

Any member of the Graduate Program in Pharmaceutical Sciences faculty can attend the exam and question the student. **The student will give a public research proposal**

**seminar that consists of a 45-minutes presentation followed by a 15-minutes period of questions and answers. The committee will then conduct a rigorous oral examination of up to 1.5 hours in length and can ask questions pertaining to the manuscript, the seminar or any other aspect related to the student's training.**

### Logistics

The student must schedule the examination with the Graduate School, through the graduate program coordinator. The student will provide the Graduate Program in Pharmaceutical Sciences & Molecular Medicine with the date, time, location, title and names of the committee members at least two weeks in advance of the exam. The student must provide a copy of the completed/approved final exam scheduling form to the graduate program coordinator, who will file the form with the Graduate School. The Associate Dean of Research and Graduate Education must sign the form before it is submitted to the Graduate School. In the event of a failed first attempt, a second attempt may be scheduled after a period of at least three months, please refer to the Graduate School Policies and Procedures on *Doctoral Final Exam Policies*.

### Internships

Graduate students have the opportunity to undertake an internship during one of the summer semesters after their second year in the program. Students must gain approval from their research advisor/mentor first and then fill out the internship form and submit to the Graduate Program Coordinator. The coordinator will then work with the student on what is required for the program and for the Graduate School if applicable. Graduate School Policies and Procedures on internships can be found under *Chapter Five, Enrollment Policy, Internship Leave*.

### Seminars and Workshops

There are two types of seminars during a student's time in the program, research seminar or graduate program seminar. Seminars are to be attended in-person, unless otherwise approved. Please contact the Graduate Program Coordinator if you cannot attend in-person.

- Research seminars: while not mandatory, the expectation of research degree graduate students is that at least FOUR research seminars are attended during an academic year. Attendance is taken.
- Program seminar: this is mandatory, and students receive academic credit. Attendance is taken.

*Note: No electronic devices during seminars. Notepad/pen are permitted.*

Workshops can be professional or personal development. The topics are determined via a poll to the students. The feedback from the poll is then examined and coordinated by the Graduate Program Coordinator. Workshops are to be attended in-person, unless otherwise approved. Please contact the Graduate Program Coordinator if you cannot attend in-person.

It is expected that students attend these as they are chosen by the students for the students. Examples of workshops are:

- Professional development such as interview & presentation prep/skills, grant writing, salary negotiations, networking
- Personal development such as emotional intelligence, time management, leadership, conflict resolution, stress management

## Forms

Graduate students will have many forms between the program and graduate school to complete; here is how to find them:

- Program forms can be found with the graduate program coordinator or on the [PhD Student Forms Page](#).
- Graduate School forms can be found on their website: <https://gradschool.wsu.edu/forms/>

## General Requirements

Graduate students should be familiar with all general requirements which can be found under Graduate School Policies and Procedures *Chapter Six, Program of Study and General Requirements*. This section houses information on:

- Courses taken at WSU and requirements such as incomplete grades, P/F coursework, online course, audit courses etc.
- Courses taken in post-baccalaureate, post-degree or teacher certification programs
- Courses taken as excess undergraduate credit at WSU
- Courses taken as part of the WSU select graduate admissions (SGA) or students targeted toward advanced research studies (STAR) program
- Courses taken as a graduate student at other accredited institutions of higher learning (transfer credit)
- Courses earned by correspondence
- Workshops
- Cooperative courses

## Termination of Enrollment

Students should become familiar with policy on the termination of enrollment per the [Graduate School's Policies and Procedures](#) under Chapter Six General Academic Requirements section *Minimum GPA (Grade Point Average) Policy and Academic Probation*.

## Assistantships

While not mandatory, the expectation of research degree graduate students is that when a student is not in class or fulfilling their TA duties, they are in the laboratory. Students on TA appointments are to spend 10 hours per week as a teaching assistant, and 10 hours per

week as a research assistant in their mentor's lab, in addition to time spent working on their rotation project. Students should be familiar with the Graduate Assistantship guidelines in the Graduate School Policies and Procedures under Chapter Nine.

## Annual Reviews

As per the Graduate School's Policies and Procedures, all graduate programs must complete an annual review of each graduate student pertaining to their academic performance. The elements of academic annual review include:

- Cumulative record including admission and classification information, course work, research proposals and all examinations, i.e., advisory, placement, qualifying, preliminary and final examinations, and progress since last review
- Qualitative assessment by faculty of progress in research and teaching, as appropriate
- Statement as to the rate of progress, i.e., satisfactory or unsatisfactory
- Expectations for the next review period
- The department/program chair will give written notification to each graduate student of his/her performance on an annual basis. After appropriate faculty have been consulted, the annual evaluation of those students whose GPA is considered deficient must be sent to the Dean of the Graduate School to be placed in the student's official file
- If an annual review for a student is less than satisfactory, a written copy of that review should be forwarded to the Graduate School

As per the [WSU/UAW Contract Article 11.4](#) and the Graduate School, all graduate programs must complete an annual review for all ASE's pertaining to their RA/TA duties. The elements of the RA/TA annual review includes evaluation on duties described in job descriptions that are given to the employee no later than 2 weeks before the indicated start date.

### Students Without Permanent Research Advisor/Mentor

The Associate Dean of Research and Graduate Education in consultation with the Graduate Program Coordinator will evaluate first year students who have not yet chosen a permanent Research Advisor/Mentor by the spring at the end of their first academic year, for the purpose of evaluating the potential of the students to complete their chosen degree. It is the students' responsibility to provide the Graduate Program Coordinator with the completed annual review.

The student will also be evaluated by the rotation advisors and faculty members supervising them as RA/TA's. These evaluations will be completed at the completion of each semester.

### Students with Permanent Research Advisor/Mentor

Coursework, research progress, accomplishments, strengths and weaknesses, and areas for improvement will be evaluated for each student by their Research Advisor/Mentor in

consultation with the student's permanent committee members. It is the students' responsibility to provide the Graduate Program Coordinator with the completed annual review.

The student will also be evaluated by their permanent research advisor/mentor regarding their RA duties. This will be completed at the completion of the academic year at the same time as the academic annual review.

### Follow up meetings for all Reviews

- The 1<sup>st</sup> year graduate students will schedule a meeting with the Associate Dean of Research and Graduate Education to discuss the review.
- 2<sup>nd</sup> year and beyond graduate students will meet with their research advisor to discuss the review.
- Faculty members who supervised the student as a TA will not be required to meet with the student unless the evaluation is considered poor. In cases of poor TA evaluations, the student will meet with the Associate Dean of Research and Graduate Education and the Graduate Program Coordinator.
- The original written review will be submitted to the Graduate Program Coordinator to review and will be placed in the student's graduate file. The WSU Graduate School will also receive a copy if the progress is unsatisfactory.

### Data Collection

Data collection must be well-organized and detailed. The laboratory notebook (bound sequentially numbered pages, with signatures and dates) is often key to keeping daily records. Detailed records help establish good work practices, provide a history of students' ideas, avoid fraud or misconduct charges, defend patents, and provide a valuable resource for a student's own work.

**DATA STORAGE AND PROTECTION** Data that has been collected must be stored and protected for future use. Data storage must be done in such a way that results and conclusions can be clearly discerned from the data and materials that have been archived. The data and materials must be protected so that research findings can be confirmed and/or reanalyzed by others. If data and materials are not properly stored and protected, it could significantly reduce the value of the research (or even render the research unusable).

For additional information on the Universities data policies see

<https://policies.wsu.edu/prf/index/manuals/executive-policy-manual/ep08/>

### Affiliation

When Pharmaceutical Sciences graduate students' author or co-author scholarly work, (e.g., a scientific paper or abstract, posters, etc.) or receive awards that are announced to the news media, the address or location of the authors or recipients should include "Graduate Program in Pharmaceutical Sciences, Washington State University." Such recognition of the program is an important source of promotion of the program to the

public. It should be done in accordance with any applicable WSU graphic identity guidelines (see: <http://brand.wsu.edu/>). When the advisor is a co-author, both the advisor's department and the Graduate Program in Pharmaceutical Sciences should appear in the affiliation.

## Students with Accommodations

Graduate students with identified accommodations should contact the Access Services office: <https://spokane.wsu.edu/studentaffairs/access-resources/> as soon as possible to start the process of approval at WSU. If you need assistance to connect with them, contact the Graduate Program Coordinator.

## Center for Community Standards

Students should become familiar with all aspects of the [Center for Community Standards](#). The Center for Community Standards mission is to help guide and correct behaviors which may not align with WSU values. They challenge students to make better choices with opportunities for educational and personal development, and accountability. Under the *Policies and Reporting* tab are the following:

- Academic integrity
- Alcohol and Drugs
- Sexual Misconduct and Discrimination
- Harm to others
- Good Samaritan guideline
- Additional Policies

University Policies and Rules can be found here: <https://policies.wsu.edu/>

## Grievance Procedures

The graduate student complaint and formal grievance processes can involve several steps depending on the nature of the issue. Students should consult the [Graduate School Policies, Chapter 12 – Graduate Student Rights and Responsibilities section E, Graduate and Professional Student Informal Complaint and Formal Grievance Procedures](#) and the [Collective Bargaining Agreement Article 37 Grievance and Arbitration](#). Any questions or need assistance on where to start, contact the Graduate Program Coordinator.

## Collective Bargaining Agreement

Graduate students enrolled in academic programs and employed by Washington State University fall in the following classifications: Graduate Teaching Assistant; Graduate Research Assistant; Graduate Staff Assistant; Graduate Project Assistant; Graduate Veterinary Assistant; Tutor, Reader and/or Grader in all academic units and tutoring centers are represented by the United Automobile, Aerospace, and Agricultural Implement Workers of America, Local 4121 (UAW). Student should become familiar with the Collective

Bargaining Agreement found here: <https://hrs.wsu.edu/employees/labor-relations/collective-bargaining/wsu-uaw/wsu-uaw-contract-2024-2026/>

General Information can be found here: <https://hrs.wsu.edu/employees/labor-relations/collective-bargaining/wsu-uaw/>

## **WSU COMPREHENSIVE NONDISCRIMINATION NOTICE**

WSU does not discriminate and prohibits discrimination on the basis of sex, race, color, national origin, disability, age, religion, creed, genetic information, marital status, protected veteran/military status, or immigration or citizenship status in any education program or activity that it operates compliant with Title IX and other civil rights laws and regulations. Inquiries regarding Title IX, ADA, or other civil rights laws, as well as reports of discrimination can be directed to the [Compliance and Civil Rights, WSU ADA Coordinator](#), or [WSU Title IX Coordinator](#). More information on WSU's policies and procedures to respond to discrimination and harassment are available here: [Nondiscrimination statement](#).